SenseAir®

Model *pSENSE - RH*
Portable Carbon Dioxide Instrument

PRODUCT DESCRIPTION

Model **pSENSE - RH** is a very flexible and easy to use hand-held, instrument designed to measure the carbon dioxide concentration, temperature and humidity in surrounding air. The large illuminated display presents the 3 values simultaneously, as well optional Air/Wet and Bulb temp by selection.

Built-in data output (RS232) makes it simple to log data for longer time. Audible alarm, Max/Min Average as well as TWA and STEL measurements are possible.

The carbon dioxide sensor's gold-plated infra-red waveguide and diffusion membrane filter provides you great reliability, accuracy and long-term stability.

FEATURES

- State-of-the-art non-dispersive infrared (NDIR) technology to measure carbon dioxide gas in parts-per-million (ppm)

- Data output RS232

- Displays the current carbon dioxide temperature and RH% on a large LCD

- Displays TWA (8hours) STEL (15 minutes) Min, Max and average values

- Internal automatic self-diagnostic function

- Audible alarm

- Easy to calibrate

APPLICATIONS

With a battery capacity covering more than 24 hours, the instrument works perfectly for diagnosing ventilation using carbon dioxide as the surrogate ventilation index.

The instrument works perfect for measuring the indoor air quality parameters CO_2, Temp and RH%. Carbon dioxide has been acknowledged as a good indicator that adequate "fresh" outside air is being supplied to the occupants for acceptable indoor air quality. Adequate ventilation reduces temporary sickness, downtime and lost productivity.

The *pSENSE* is also ideal for measuring carbon dioxide concentration and humidity in *incubators*, *green-houses, mushroom farms, etc.*, where correct levels are essential for the process outcome.

Model **pSENSE – RH** *portable carbon dioxide instrument*
*Technical Specification**

Measurement

Operating Principle	Non-dispersive infrared (NDIR) with gold plated optical cell
Gas Sampling Mode	Diffusion
Response Time (1/e)	Approx 30 sec
Measurement Range	0-5000 ppm
Extended Range	5001-9999 ppm
Accuracy	± 30 ppm $\pm 5\%$ of reading (CO_2) (0 ~ 5000 ppm)
	$\pm 0.6^o$ C/$\pm 0.9^o$F, ± 3 % RH (at $+25^o$C, 10 ~ 90 %)
	others $\pm$ 5 % for other RH ranges
Warm up time	30 seconds
Response time	about 30 seconds
Alarm sound level	80 dB
Operating condition	0° ~$+50^o$C, 0 ~ 95 % RH (avoid condensation) for CO_2
Storage condition	-20° ~ $+60^o$C
Power supply	AA type (UM-3) x 4 pcs
Battery life	> 10 hours
Standard packing includes	Meter, manual, batteries and hard carrying case
Optional accessories	Salt solution HR33, HR75%, adaptor 9V/100-240VAC,
	RS232 software with D-sub connector VZRS232M
Pressure Dependence	+ 1.6 % reading increase per kPa deviation from normal pressure
Calibration	Manual calibration with fresh air
Resolution	2 ppm – CO_2 concentration,
	0.1 ^{o}C / ^{o}F - Temperature, 0.1% RH - Humidity
Numerical Liquid Crystal Display	Simultaneous display of

* CO_2 concentration (in ppm.)
* temperature
* RH %

Temperature

Temp. range	0° C ~ $+50^o$ C
RH range	0 % ~ 95 %
DP (Dew Point Temperature)	-73.4^o C ~ $+60^o$ C
WB (Wet bulb Temperature)	-13.3^o C ~ $+60^o$ C
Measurement Range	0° to $+60^o$C
Accuracy	$\pm0,5^o$C

Data Output

Digital Interface RS232	Special cable
PC software	Windows 95/98/NT/ME/2000/XP Software and cable sold as option

Electrical:

External supply	Plug in transformer
Internal Battery	4 pcs AA batteries 24 hours capacity

General Performance:

Compliance with	EMC Directive 89/336/EEC
Storage Temperature Range	-20° to $+70^o$ C
Operating Temperature Range	0° to $+50^o$ C
Operating Humidity Range	0° to 95 % RH (non Condensing)
	209.4L*70W*57.7H (mm)
Size	
Weight	about 180g (battery excluded),
Sensor Life Expectancy	> 15 years
Power-up Time	< 30 sec. (full specs < 15 minutes)
Housing Material	ABS/PC blend